SASKATCHEWAN

Western Spiderwort

Status: Endangered

(*Tradescantia occidentalis*)

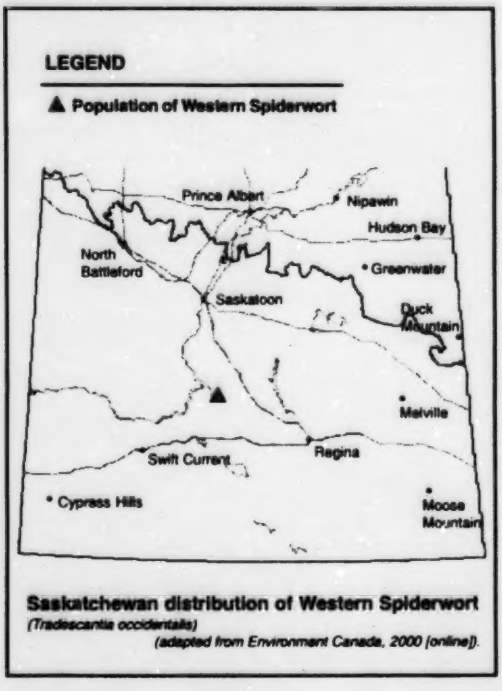
Species at Risk

© Bob Plaster

Description

Western Spiderwort is a perennial species belonging to the Spiderwort or Commelinaceae family. It has a mostly straight stem that bends slightly where each leaf joins. The plant is between 10 and 50 centimetres tall. The plant's leaves are grasslike and alternate measuring 10 to 30 centimetres long and 0.4 to 1.2 centimetres wide. The leaves are folded lengthwise.

Western Spiderwort produces flowers that are arranged in clusters of up to 25 individual flowers on stalks that hang over when in bud. Each flower has three rounded petals that are between seven and 15 millimetres long. The flowers range in colour from rose to blue and may even be white. Within the flower cluster, only one flower opens daily and it is very short-lived. Very early in the morning it opens, within a few hours it closes, then wilts and the petals are shed.



Saskatchewan distribution of Western Spiderwort
(Tradescantia occidentalis)
(adapted from Environment Canada, 2000 [online]).

The fruit is an oblong capsule divided into three parts. Each part produces one or two grey seeds that measure two to four millimetres long.

Spiderwort plants derive their name from the sticky, stringy material that they secrete when their stem is broken. Once this sticky substance hardens, it forms a cobweb-like material.

Status

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed Western Spiderwort as threatened in 1992. Listed as an endangered species in Saskatchewan, in *The Wild Species at Risk Regulations*, Western Spiderwort is protected on private, provincial and federal lands under part V of *The Wildlife Act*.

Western Spiderwort is common on the Great Plains of the United States. It is found in the following states: Montana, North Dakota, Minnesota, Wisconsin, Idaho, South Dakota, Iowa, Nebraska, Utah, Colorado, Kansas, Missouri, Arizona, New Mexico, Texas, Oklahoma, Arkansas, and Louisiana. It is also found in New York state and has been introduced as an exotic in New Jersey.

In Canada, Western Spiderwort is found at four sites in three provinces. In 1992, Manitoba had the largest site with an estimated 1,700 plants. In the same year, a second site in Manitoba was estimated to have 100 plants. Both sites are found in sandhills in the southwestern part of the province. In 1996, a Manitoba provincial report indicated the province's population of Western Spiderwort was estimated at 46,783 plants.

Western Spiderwort was not discovered in Saskatchewan until 1991. The Saskatchewan population is found in the Elbow Sand Hills which include Douglas Provincial Park. In 1992, Saskatchewan's population was estimated at 100 plants.

Alberta's population of Western Spiderwort plants is located in the Pakowki Lake Sand Hills and, in 1992, the population consisted of more than 200 plants.

Habitat

In Canada, populations of Western Spiderwort grow on dry sandhill environments in the mixed grass prairie. Western Spiderwort grows best on southwest facing slopes of partially stabilized sand, with some vegetation growing, in sandhill areas. Western Spiderwort is also found growing in active sand (an area where the sand is being blown by the wind).

Life Cycle

Western Spiderwort usually flowers in late June and early July. In Saskatchewan, it has been known to bloom in mid-June and can be finished flowering by early July. Western Spiderwort reproduces by seed formation, or by rooting at the joints of the stem. Seeds in capsules usually disperse through being knocked out by wind or by passing animals. Spiderwort's seeds are also large enough that they might be picked up and stored by voles and mice.

Limiting Factors and Recovery Needs

Loss of habitat is the main factor causing the decline in Western Spiderwort populations. The conversion of native prairie into agricultural lands has greatly decreased the amount of suitable habitat for the species. Currently, petroleum exploration is threatening to wipe out the largest Canadian population in Manitoba.

A weed called Leafy Spurge (*Euphorbia esula*) is also threatening the remaining Western Spiderwort populations. It is an exotic weed that spreads very quickly and forms dense stands that exclude other plants. This excessive vegetation causes shading and stabilizes the slopes of the dunes. Western Spiderwort cannot compete under these conditions.

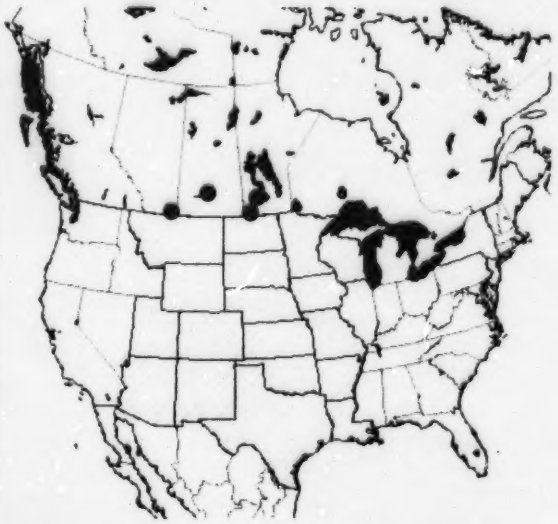
Suitable habitat for Western Spiderwort must be secured in order for the species to survive. Continued monitoring

North American Distribution of the Western Spiderwort
(*Tradescantia occidentalis*)

LEGEND

States in which Western Spiderwort populations are reported c. 1935 - 2000

Canadian Populations of Western Spiderwort 1992 - present



(adapted from Environment Canada, 2000 [Online], Smith and Bradley, 1990, and Saskatchewan Conservation Data Centre, 2000).

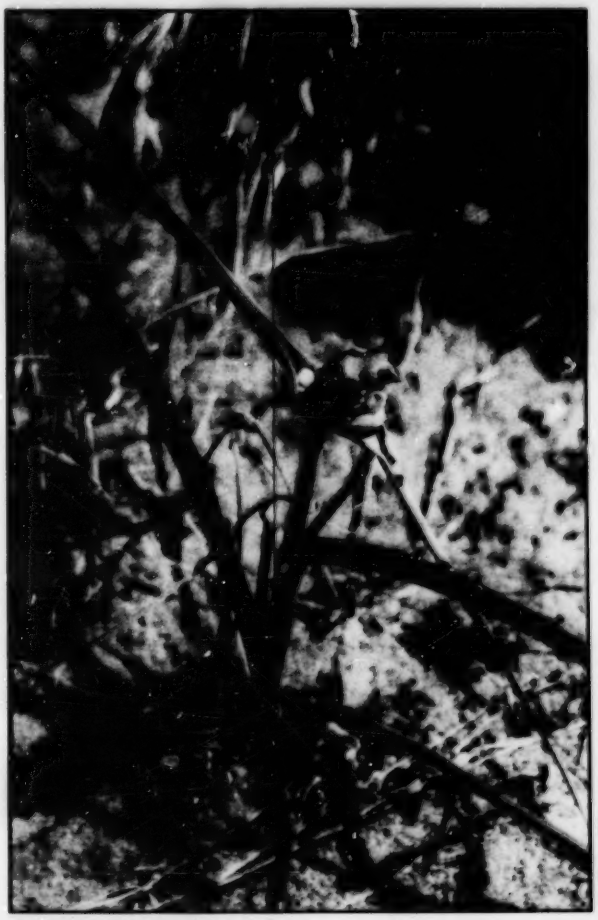
as well as detailed research of the species and its habitat is required to determine more about the plant and the factors that limit its survival.

Recovery Actions

Western Spiderwort has been protected since 1999 on private, provincial and federal land in Saskatchewan, under part V of *The Wildlife Act*. In Saskatchewan, the population is monitored during the flowering season and sheep-grazing is permitted in the eastern end of the Elbow PFRA Pasture to help reduce the leafy spurge population.

In Manitoba, the Manitoba Department of Natural Resources (now Manitoba Conservation) is studying the environmental limits of Western Spiderwort, the effects of introducing Black Dot Spurge Beetles to control Leafy Spurge, assessing ways of artificially reproducing Western Spiderwort, monitoring sites where the species is found, and continuing research on the species.

In many cases the entire ecosystem is endangered and not just a specific endangered species. These ecosystems are fragile and must remain undisturbed. The continued survival of all endangered species relies on protecting the habitats of the species at risk as well as the species themselves.



© Bob Plaster

Western Spiderwort in bud

© Bob Plaster

Western Spiderwort in bud, with the first flower opening

© Bob Plaster

Important: All endangered species including plants, are protected in The Wild Species at Risk Regulations under part V of The Wildlife Act. Western Spiderwort is protected on private, provincial and federal lands. It is unlawful to pick or collect endangered plants, or seeds of endangered plants, without a special permit.

If you observe Western Spiderwort growing in the wild, please contact the Saskatchewan Conservation Data Center online at www.biodiversity.sk.ca

Selected References

Please contact your local library or visit the Internet sites below for more information on the Western Spiderwort.

Environment Canada. 1999. Western Spiderwort. [Online]
http://www.speciesatrisk.gc.ca./English/SearchDetail.cfm?SpeciesID=236
Last visited: March 16, 2001

Environment Canada. 2000. All species at risk (Map). [Online]
http://www.sis.ec.gc.ca/cgi-eas/endanew.exe
Last visited: March 16, 2001

Godwin, Bob and Jeff Thorpe. 1991. An addendum to the COSEWIC status report on western spiderwort. The Committee on the Status of Endangered Wildlife in Canada. 4 pp.

Native Plant Society of Saskatchewan. 2000. Native plant news. Vol. 5 No. 1, page 8.

Smith, Bonnie and Cheryl Bradley. 1990. Status report on the western spiderwort. The Committee on the Status of Endangered Wildlife in Canada. 52 pp.

May, 2001

Saskatchewan Environment and Resource Management

Fish and Wildlife Development Fund

NATURE SASKATCHEWAN

receives funding from

Saskatchewan LOTTERIES